

Clean Water and Flood Abatement Task Force

Thursday, April 13th, 2016

10:00 a.m. – 12:00 p.m.

Buena Vista Conference Center-Buck Library

Meeting Attendance

Task Force Members:

Present:

Senator Bryan Townsend
Senator Bryant Richardson
Representative Ronald Gray
Representative Michael Mulrooney
Jeffrey Bross
Roy Miller
Howard Morrison
Brenna Goggin
Lew Killmer
Joseph Corrado
Gina Jennings
Paul Morrill
Gerald Kauffman
Gerard Esposito
George Haggerty
Robert Baldwin
Thomas Unruh
Bruce Jones
Jen Adkins
Patty Cannon

E-mail:

Bryan.Townsend@state.de.us
Bryant.Richardson@state.de.us
Ronald.Gray@state.de.us
Michael.Mulrooney@state.de.us
Jeff@duffnet.com
policy@inlandbays.org
lmorrison@countygrp.com
brenna@delnature.org
lew.killmer@mac.com
JCORRADO@CORRADO.COM
gjennings@sussexcountyde.gov
pmorrill@committeeof100.com
jerryk@udel.edu
jesposito@tuiwater.com
GOHaggerty@nccde.org
robert.baldwin@dacdnet.org
townsendunruh@aol.com
bjones@pennoni.com
jadkins@delawareestuary.org
Patricia.Cannon@state.de.us

Absent:

Secretary Jennifer Cohan
Secretary David Small
Thom May
Andrew Jakubowitch
Sam Lathem
William Lucks
Dian Taylor
Michael Riemann
Holly Porter
Christine Mason

Jennifer.Cohan@state.de.us
David.Small@state.de.us
Thom.May@state.de.us
Andrew.jakubowitch@co.kent.de.us
lathem.de.aflcio@comcast.net
wluks@wluks.com
dtaylor@artesianwater.com
mriemann@beckermorgan.com
Holly.Porter@state.de.us
christine@sussexshoreswater.com

Staff:

Michelle Zdeb
Caitlyn Gordon

Michelle.Zdeb@state.de.us
Caitlyn.Gordon@state.de.us

Attendees:

Jay Meyer
Chris Bason
Daniel Fay
Doug Hokuf
Terry Deputy
Marjorie Crofts
Ed Hallock
David Spacht
Kelly Glenn
Michael Bard
Martha Narvaez
Lisa Pertzoff

Organization:

Protecting Our Indian Rivers
DECIB

NCC
DNREC
DNREC
DPH/ODW
AWC
NAWC
Delaware Nature Society
UD WRA
LWVDE

The Task Force meeting was brought to order at 10:12 a.m.

Overview of Materials

Senator Bryan Townsend, Co-Chair, welcomed Task Force members to the meeting and thanked everyone for coming. The Senator began a discussion of the “Overview of Materials” and also asked members what they would like to talk about first, the Draft Legislation or the Draft Findings and Recommendations.

Lew Killmer, Delaware League of Local Governments, referenced the Draft Legislation as the document that he would like to discuss first:

1. On Page 3 line 7 there is a definition for “combined sewer system.” Mr. Killmer noted that he does not think defining this term is necessary when there is only one reference to it throughout the entire document.
2. On Page 3 line 15 there is a definition for “employee.” Mr. Killmer does not think that this is necessary.

Senator Townsend replied to Mr. Killmer’s concerns regarding defining the “combined sewer system.” He understands Mr. Killmer’s reasoning for wanting to take out that definition. However, there are several times he has seen, on the Senate floor, where the lack of defining a phrase was the basis of senators opposing legislation.

Paul Morrill, Committee of 100, responded to Mr. Killmer’s concerns with defining “employee” in the legislation. He told Mr. Killmer that defining “employee” was a decision made by the attorneys.

Senator Townsend asked Mr. Morrill to give a brief overview of the updated legislation.

Minutes prepared by Caitlyn Gordon, Legislative Aide

Minutes reviewed by Michelle Zdeb, Legislative Assistant & Task Force Staffer

Mr. Morrill provided a summary of the changes that they made to the legislation:

1. They added back in the Financial Bond Council.
2. They added back in the Land and Conservation Trust Fund as a part of the funds that could be dedicated to the Clean Water Fee.
3. They removed the details about the wastewater and septic fee because after the last Task Force meeting there was discussion on whether or not this would be technically feasible for the counties. Instead, they added the word “household,” which referenced the discussions with the Finance Department about the possibility of imposing a surcharge on income taxes or business licenses, but those conversations were not complete.

Terry Deputy, on behalf of Secretary Small and DNREC, added a few comments on behalf of Secretary Small. He has big concerns for DNREC becoming the collection vehicle for these collections. He feels that the collections should be made at the county level with assistance from the Department of Finance or the Department of Labor. DNREC is not in the business of doing this type of work, and they strongly recommend that the collections should be made at the county level.

Mr. Morrill noted that they ran out of time to pin down the collection details. Some people at the table would like to see it stay as a wastewater fee, but after having meetings with DNREC representatives and the counties, they were not convinced that a wastewater fee was technically feasible.

Mr. Deputy referenced this discussion from a year ago, when there were conversations about making the collections at the county level. He noted that the idea of collecting at the county level was taken well. However, there was an issue with the different categories of businesses, which would need to be added in. Although there are databases that are proprietary, those databases can be sanitized for the purpose of collections.

Senator Townsend stated that there are technical issues involved with collections, and there is also a desire to be the point entity for collections. However, the Task Force needs to consider how much time should be spent discussing collections.

Mr. Bross noted that New Castle County is very reluctant to become the billing mechanism for this collection. There has also been input from the business community, and there is a perception as to who bills this.

George Haggerty, NCC County Executive, stated that the people who get the money should be the ones in charge of collecting it.

Gerard Kauffman, University of Delaware’s Water Resource Agency, stated that he favors the water bill as the most optimal billing mechanism.

Mr. Esposito stated that they could be the ones to bill, but the municipalities will also have to do it, which could be a problem. The cost of adding something to an existing bill is incremental, not significant. If the State were to create a billing mechanism from scratch, it would be a significant investment; the cost would be \$3.00 per bill.

David Spacht, on behalf of Dian Taylor and Artesian Water, noted that there is a fundamental underlying problem: the comingling of funds between the Clean Water Act and the Safe Drinking Water Act. Companies like Tidewater and Artesian Water Company, have low-cost financing through the tax-free bonding mechanisms available to them through the Safe Water Drinking Act. However, on the Clean Water Act side, the same companies do not have access to those funds. He continued by saying that the proposed legislation would comingle funds by taking funds away from the Safe Drinking Water Act and the Clean Water Act and also taking these funds away from a private entities' ability to use it.

Mr. Spacht also noted that the Clean Water Act and the Safe Water Act have two different roles for which their funds should be used, and now the legislation is comingling them. The proposed legislation is also taking these funds away from private entities who serve a large percentage of Delaware that municipalities do not serve.

Joseph Corrado, Delaware Contractors Association, stated that the Safe Drinking Fund was about to lose \$40 million from the federal government because it was not getting enough use. The only way that the State was able to save these funds was by moving that \$40 million to the Clean Water Fund. Since they moved these funds, they were able to fund Wilmington's energy plant through a loan.

Mr. Deputy stated that federal law allows the transfer of funds between the Clean Water Program and the Drinking Water Program, as a state's governor determines the need for it.

Mr. Spacht referenced page 10, paragraph A of the proposed Draft Legislation, "No tax exempt financing considerations will need to be discussed with bond counsel." He continued by saying that this same comment follows through on page 13 under the "pledge of revenues" section 1 "NOTE: tax exempt financing considerations to be discussed," as it relates to private companies. Mr. Spacht noted that there is clearly a discrepancy in regards to public entities gaining and accessing those funds.

Mr. Deputy commented that a private utility would have access to a taxable issuance. If the legislation were to leverage the proposed fee as tax exempt, then the private utility would not have access to it. Mr. Deputy stated that the flip side of that is the Clean Water Program allows borrowing from private utilities, so the State can lend that money through WIAC (Water Infrastructure Advisory Council), in addition to providing subsidies and principal forgiveness.

Mr. Bross stated that above all the concerns and political ramifications, they need to have a central entity manage the billing.

Minutes prepared by Caitlyn Gordon, Legislative Aide

Minutes reviewed by Michelle Zdeb, Legislative Assistant & Task Force Staffer

Mr. Esposito stated that there are about 225 water systems that deliver water, and only 31 of them are municipalities. He explained that one billing entity is better than 50 because all they need is one municipality to debate and oppose this legislation in Legislative Hall and it's done.

Mr. Spacht stated that he wants to carve out the Safe Drinking Water Act. He confirmed that although this takes away the leveraging, there otherwise is a fundamental problem with it.

Mr. Esposito asked Mr. Deputy to clarify what he was saying in reference to Mr. Spacht's remarks.

Mr. Deputy noted that the proposed fee could either be taxable or tax exempt. To the extent that it is tax exempt, it is very difficult to provide those funds to a for-profit company, so from this standpoint Mr. Spacht is correct. But that is a whole separate and different issue from the existing Clean Water Fund that already exists in the State. That fund has not been leveraged, and they don't anticipate that it will be leveraged because the State has a sufficient amount of cash flow. These funds are now available to invest in private utilities, for borrowing purposes. The only restriction is the State has imposed growth-related conditions on where those funds are utilized. However, in either case, if and when those funds are leveraged, they will be separate issuances and not comingled, and the core issue will be whether or not they are tax-exempt or taxable. This is why the State wants to release these as non-taxable so that it can cover the funding for as much infrastructure as possible.

Mr. Morrill wanted to remind members that the leveraging of funds in the proposed Draft Legislation is only one aspect of this. There are other federal funds that come with legal restrictions. That's part of the power of combining them all, to leverage more funding. However, they need to keep track of them. Each type of federal funding that the State receives will need to be used for that specific purpose only, not another purpose.

Mr. Spacht stated that most of Artisan's facilities fall out of Level III and into Level IV funding zone, and they are not allowed to receive Level III funding if they fall into Level IV. He continued by saying that there are "painted lines" around municipalities, but most funding levels fall into municipalities. However, this does not help Artesian.

Mr. Deputy responded by saying that there are many ways to address this. For instance, they do not have to pledge the entire amount of the proceeds from the proposed water fee. He continued by saying that they could pledge 75% or 50% and issue that as tax-exempt and have the other portion available to invest in the utilities.

Mr. Kauffman stated that maybe this is something that should be explored further. Other states that are less progressive than Delaware are already doing this. Storm water, which is the function of the Clean Water Act, becomes drinking water. That is why the Safe Drinking Water Act is comingled with the Clean Water Act, because it should be.

Jen Adkins, Partnership for the Delaware Estuary, noted that the Task Force is slowly working their way back to the beginning. She noted that everything that the Task Force keeps going over was already discussed. Although there is not a perfect collections mechanism, these same conversations are how the Task Force decided that the county collections were the best-case scenario.

Senator Townsend responded by saying that if collections are the biggest issue then the Task Force should keep deliberating it.

Ms. Adkins stated that there are parts in the document that need work. She asked if this is something that the Task Force will discuss, or something that another group is going to work on.

Mr. Morrill noted that he was not optimistic that the Task Force was going to come to the final answer on the collection point. But, in reference to unfinished parts of the Draft Legislation, some of them came in from Bond Council when they reviewed earlier drafts.

Mr. Esposito asked why, if there was a one-database system with either finance records from the State or property records from the county that are assembled and protected, can't WIAC do the billing with the assembly of databases coming from other places?

Senator Townsend responded by clarifying that Mr. Esposito's idea is not completely off the table, and he understands why people do not want ownership of collections. Therefore, if having WIAC collect the fee involves the same costs as having DNREC collect, then that collection mechanism is fine.

Roy Miller, Delaware Center for the Inland Bays, stated that there are three potential options that the Task Force should discuss. First, does the State pay for this through the water bill and call on DNREC to collect fees through private wells? Or, does the Task Force decide to have the counties collect it through their existing tax structure? The third option is to have WIAC make the collections through a private contracting agency. He stated that before the Task Force ends, they should adopt one of these choices to give guidance to the General Assembly.

Senator Townsend noted that the Draft Findings, number 14, gets at that issue, explaining that there is no perfect option. In the Draft Recommendations, number 6 is designed to insert the Task Force's top recommendation for collections. *(Please see the next page where the Draft Findings and Draft Recommendations are inserted in which Senator Townsend is referencing.)*

TASK FORCE FINDINGS

1. Clean water is essential to the health and vibrancy of Delaware's population, economy, and environment.
2. As of 2016, Delaware faces significant challenges with regards to statewide water quality. More than _____ percent of Delaware's waterways are impaired. This impairment is due largely to nutrient pollution but also due to toxic pollutants. Although point-source pollution should be minimized and laws enforced as much as possible, nonpoint source pollution poses a clear, present, and driving threat to water quality in Delaware.
3. Legacy issues are a significant source of impairment in Delaware's waterways, though ongoing activities and nonpoint source pollution continue to pose challenges. In total, barriers to clean water threaten segments of Delaware's economy that comprise \$_____ in annual economic activity and \$_____ in annual revenues to the State.
4. Delaware has the scientific knowledge and engineering know-how to resolve its water quality challenges. It currently lacks sufficient funding to do so. Yet in a survey, more than ___ percent of Delawareans indicated they would be willing to pay an annual fee of \$_____ for clean water.
5. Over time, total funding for water quality has not kept pace with funding needs and with increasingly rigorous standards for what is considered to be clean, unimpaired water. Federal funding has not increased over time and state-level funding has been inconsistent, even in the face of regulatory drivers that ultimately have consumed so much of any available funding. Inconsistent state-level funding includes the recent underfunding of Delaware's Twenty-First Century Fund to address stormwater and flood control. In total, this has resulted in insufficient funding to meet Delaware's water quality challenges. There currently is a shortage of \$_____ annually in the amount of funding directed to water quality programs in Delaware.
6. Through its Water Infrastructure Advisory Council (WIAC), over time Delaware has addressed many important water quality projects. The funding for these projects has come in the form of both loans and grants, and the awarding of funds has involved a transparent, data-driven review process. The size of the revolving funds via which WIAC supports water quality projects is \$_____, with annual funding ranging from \$_____ to \$_____ in recent years.
7. At times, local governments have been unwilling (e.g., refusing to go to referendum) or unable (e.g., failing to pass a referendum) to secure partial funding from their own local tax bases to provide critical partial matching of the Council's resources. This has resulted in pressures and requests for grant money, rather than in local governments entering into long-term loan arrangements.

8. The current model and amount of resources are not meeting Delaware's water quality needs. More funding is needed, and a sustained, predictable source of funding that can be leveraged is a model that could have a tremendously positive impact on water quality in Delaware, particularly if the model also accounted for public-private partnerships that might form around clean water initiatives.
9. In addition to the direct, long-term economic benefits of clean water in Delaware, projects to enhance water quality will have a stimulating effect on the Delaware economy through the employment of community members involved in the design, construction, and monitoring of water quality projects.
10. The composition of WIAC, as well as the length of its members' terms, can be updated to include Delaware's agricultural community and to encourage more frequent appointments or reappointments to WIAC.
11. There is a consistent lack of public awareness and understanding of water quality issues and the drivers of Delaware's impaired waterways. A sustained campaign promoting public education on these issues would be of broad public benefit, including efforts that distinguish between the water pollution that is occurring upstream from Delaware and the water pollution that is occurring right here within our own borders.
12. Many members of Delaware's agricultural community have adopted Best Management Practices on their farms to help minimize water pollution. A large majority of these BMP efforts are known to Delaware agricultural leaders and environmental regulators.
13. Statewide, Delaware has made significant progress in adopting better pollution controls in recent years. The impairment of Delaware's waterways did not occur quickly, however, and even with recent adoption of better practices it will take time to return our waterways to a healthy state.
14. There is no perfect collection process for any statewide fee that might be implemented to raise resources for clean water and flood abatement projects. Any system would inevitably involve administrative costs, and tying collections to existing forms of billing or collections for other water-related activities would risk confusing the reasons for the additional fees as well as the parties responsible for levying and directing the fees.

TASK FORCE RECOMMENDATIONS

1. The Delaware General Assembly should significantly increase the annual investments in upgrading and maintaining Delaware's water infrastructure, promoting water quality, alleviating flooding and providing flood control, and preventing or responding to stormwater damage.
2. Annual investments in water infrastructure should be funded via a statewide per-household and per-business fee ("Clean Water Fee") that enables sustained, reliable funding and the leveraging of these resources to obtain additional funding from federal and private sources. Per-business fees should be set at different tiers to adjust for the size of the businesses.
3. The Clean Water Fee should be collected in an administratively practical way, to the most effective and efficient extent possible. The revenues from the Fee should be pooled in a fund whose use – absent a supermajority vote of the General Assembly – is focused exclusively on water quality projects and on the scientific monitoring and measurement necessary to gauge accurately the impacts of the projects and the overall quality of water in Delaware.
4. Increased annual investments in water infrastructure should be made in the form of loans and grants, with loan and grant decisions made in a manner similar to the established policies and practices of Delaware's Water Infrastructure Advisory Council. This includes oversight by a diverse group of informed individuals (the Water Infrastructure Council, or "WIC"), in accordance with a transparent, data-driven application process. The WIC should include a mix of public sector and private sector appointees who represent a variety of perspectives that come to bear on the measurement, design, construction, implementation, and maintenance of systems relating to water quality and flood control. Delaware's agricultural community and conservation districts should be represented within this diverse group, especially in light of the opportunities to enhance water quality in Delaware via coordination with these groups.
5. The WIC's investment decisions should be made on the basis of the merits underlying each application for funding, and generally in accordance with an updated long-term clean water plan for Delaware. Appropriate consideration should be given not only to projected efficiencies (such as consideration of a project's proposed cost per pound of reduced nutrient runoff) and utilization of green infrastructure techniques, but also to environmental justice. Here, environmental justice refers to the ideal that people of more limited economic means should not consequently have to live in environmental conditions hazardous to their health. This ideal can be realized by consideration specifically being given to grant applications or grant expenditures that would alleviate water quality challenges or flood control challenges for communities of limited economic means.

6. Collection of the Clean Water Fee should be facilitated via [INSERT DESCRIPTION HERE]. This Task Force considered several alternatives to this proposal, including [INSERT BRIEF DESCRIPTION OF ALTERNATIVES]. Ultimately the Task Force deemed this proposal to be the one most likely to lead to a successful collection of the Clean Water Fee, including administrative practicality and clarity.
7. As public education is a critical element of building and sustaining public awareness of water quality and flood issues, as well as the public's faith in the merits of the Clean Water Fee and the WIC, a sustained public education and outreach campaign should be developed and appropriately funded. This development and funding should be in addition to the scientific measurement of water quality and flooding in Delaware, as well as the construction, operation, and maintenance of physical projects that will address water quality and flooding in Delaware.

Mr. Haggerty stated that the fourth option for collections is to have the State of Delaware combine their existing statewide tax that they send out every year with this collection.

Senator Townsend asked if Mr. Haggerty's proposal is any different from having WIAC collect the water fee.

Mr. Morrill stated that the difference with Mr. Haggerty's proposed collection mechanism is that the State could use an existing tax or permit system and add this onto it.

Mr. Esposito noted that there is a difference from Mr. Haggerty's option. Having private contractors collect the fee would be cheaper if the State were to use an existing billing system rather than creating a brand new billing system.

Ms. Cannon suggested that the public accommodation tax, which shares the burden of cleaning up the waste from tourists, should still be a consideration. Another potential revenue source is the gas tax. Ms. Cannon noted that it is unfair to suggest that every municipality would be against collecting this fee.

Senator Townsend noted that there are tremendous benefits to Delaware, and municipalities, for solving these problems. The Task Force should remember to keep our eye on that ball, too. The Senator continued by saying that in terms of taxes, there are so many other things to look at but he was not sure if the Task Force will get there.

Senator Richardson stated that the establishment of the Clean Water Fee is about who will pay how much. He asked what the mechanism is for increasing that fee.

Senator Townsend responded that the only way the fee could be increased is by legislation. Additionally, over time the goal is that the State would not need this fee because the water quality issues would be addressed and the fee could be reduced.

Minutes prepared by Caitlyn Gordon, Legislative Aide

Minutes reviewed by Michelle Zdeb, Legislative Assistant & Task Force Staffer

Senator Richardson referenced the gas tax and stated that there was a letter in *The News Journal* where one person said that he would pay a dollar per gallon extra tax because the price of gas went down. Senator Richardson joked that maybe the Task Force could make the gas tax a voluntary thing. *Chuckles*

Mr. Killmer stated that a public accommodation tax is not a level playing field. An increase in this tax would hurt the people who rent vacation homes. Additionally, there had been talk about using this money for beach replenishment because this is something that DNREC does not have money for.

Ms. Adkins commented that if the Task Force was to look at something else like a State revenue tax, it would make sense to pair it with something like an accommodation tax.

Senator Townsend asked what impact there would be to bonding and financial management if a percentage of the public accommodation tax funded the Clean Water Fund.

Mr. Deputy replied that in terms of funding and financial management, bondholders want to have the assurance and consistency to support the bond issuance. Typically, the first year of any operation like this would be an experimental year. After that first year, it would need to be determined what assurance of true gross tax revenues the collector would get back, minus collection problems that they might have and administrative costs that they take off of the top.

Senator Townsend noted that all of the issues that the Task Force is discussing are largely technical and can only be addressed in the legislation.

He also noted that Holly Porter, Delaware Department of Agriculture (DDA), sent comments in that the Task Force staff circulated. He continued by reviewing the comments that she sent, including that “DDA strongly opposes a county collar for the fee.” Ms. Porter also sent in a question about billing. She also asked if the Secretary of Agriculture and the Secretary of Health of Social Services could be added to the trust. Senator Townsend asked if any Task Force members had strong feelings towards her comments and suggestions.

Mr. Killmer asked to clarify if the collaring issue benefits counties with a large population more than counties that don’t have a large population.

Mr. Corrado noted that he agrees there should not be a collar. The history of WIAC and how it has funded projects is colorblind as to where the money came from. It works strictly off of need.

Senator Townsend asked who feels strongly about the collar.

Mr. Haggerty noted that NCC does. He stated that if the State is requiring NCC to collect funds, the money should stay there. He continued saying that there must be a way to evaluate programs that have a Statewide benefit to them, and in this circumstance use funds from all three counties and undo the collar.

Minutes prepared by Caitlyn Gordon, Legislative Aide

Minutes reviewed by Michelle Zdeb, Legislative Assistant & Task Force Staffer

Ms. Adkins stated that if the county was involved with collecting the fee, she would understand.

Mr. Haggerty commented that if the funds are collected at the State level, then he would not mind if the collar went away.

Thomas Unruh, Delaware Farm Bureau, noted that the State should not worry about county lines, as if the separate counties mean they are different people.

Senator Townsend stated that it seems that the Task Force unanimously agrees on taking the collar away.

Mr. Corrado referenced WIAC's history, and continued by saying that it is clear the WIAC has always been apolitical. The reason why it has always been apolitical is because most of the people on the Council were citizens, not politicians. The members who made up the council may have belonged to different entities, but they were not political. He added that if the Task Force decides to put a political representative on WIAC, the Council could turn political and that would be a shame.

Senator Townsend stated that Bruce Jones, American Council of Engineering Companies of DE, has submitted edits for the legislation. He continued by saying that Task Force staff will get those changes to legislative drafters if nobody has changes to the edits.

Mr. Killmer referenced page 7 of the legislation. Next, Mr. Killmer referenced a former draft of the legislation, where there was a section about dedicating a minimum of \$2 million towards storm water management and damage prevention. He asked if that was still supposed to be a part of this draft of the legislation. Mr. Killmer noted that it is not in the document anymore because it was a part of the WIC (Water Infrastructure Council) section, which is now deleted.

Mr. Morrill responded that it is supposed to be in the legislation so they will put it back in.

Mr. Miller suggested that a definition of "infrastructure" would be helpful because the term is too broad. Additionally, Mr. Miller noted that the legislation should be clearer as to what the "trust" is. The word "trust" is used repeatedly in the Draft Legislation, and defined as the "Clean Water Trust Fund." Mr. Miller said since "trust" is used interchangeably with council, the Task Force should clear that up.

Senator Townsend stated that the members need to talk briefly about the next steps for the Task Force. He said that there are legislative changes to be made that were talked about during this Task Force meeting, and some definitions need to be changed. However, the collections mechanism is still being discussed. Senator Townsend asked Mr. Morrill if the Final Legislative Draft would be circulated at the next meeting.

Mr. Morrill replied that he could incorporate what was discussed during this Task Force meeting but the collections issue will not be solved.

Minutes prepared by Caitlyn Gordon, Legislative Aide

Minutes reviewed by Michelle Zdeb, Legislative Assistant & Task Force Staffer

Mr. Spacht asked for clarity around the Bond Council, whether it is in legislation or some sort of narrative.

Senator Townsend replied that Mr. Spacht's concerns should be put front and center as well along with the collection issue.

Mr. Deputy noted that admin use was a concern from Secretary Small, including funding staff through tax revenues.

Senator Townsend replied that the Task Force didn't come to a firm decision about that but he noted that there is not a lot of controversy around that because that's the cost of using DNREC staff. Next, he asked for quick suggestions on the collections model. At the final meeting, he would like to take a vote from the Task Force to see what collection model the majority of members prefer.

Senator Townsend outlined all of the collections mechanisms that the Task Force has left to consider: WIAC itself, DNREC, Finance, or the water bill. At the next meeting the Task Force will dive into the collections mechanism further.

Senator Richardson referenced the fee to farmers that "each farm should be accountable for one clean water fee." He noted that because this doesn't say residential, it could be mistaken as one business clean water fee.

Senator Townsend replied that they need to make sure everything is defined.

Mr. Morrill stated that he just wants to get to a consensus; the Task Force has talked about farms as both a residential fee and a business fee, so he wants to get clarity on this.

Senator Townsend responded that the real concern is making sure farmers do not get charged with a fee more than once. Therefore, at the next meeting he asked that this section be clearly defined in the draft legislation.

Public Comment

Chris Bason, Center for Inland Bays and member of the public, asked the Task Force to mandate explicitly in the legislation that funding priority should be given to grants that would fund the most cost effective projects within a class of pollution control actions. He also stated that if the Task Force agrees, he would be happy to draft up a statement with Mr. Miller.

Mr. Jones followed Mr. Bason's comments by noting that there is a process in place for prioritizing projects.

Mr. Bross stated that he is afraid to put an overarching policy in place, because there then could be an issue if Seaford, Wilmington, or Newark comes to WIAC saying that they have an MS4 violation so they need a specific amount of spending money on a project to solve their problem.

If their funding request ranks and meets all of the criteria, he does not want to have a battle trying to get funding for them because there is a policy in place that says he can't. Mr. Brass closed his comments by saying that they need to just trust the process that the money will be going to the most effective projects. However, WIAC also needs to prioritize where they spend their money because there are projects that need to be paid for to address violations.

Ms. Goggin stated that the Task Force can include a one-liner in the findings that says "the money that is collected will be used in a cost effective and environmentally sustainable way." She stated that this would solve the problem of having regulatory requirements that are causing concerns with putting it in the legislation.

Senator Townsend moved the discussion to the next member of the public signed up to speak, Daniel Fay.

Mr. Fay stated that a corporation near his house has untreated wastewater going into the Beaver Dam Creek, which is 100 feet behind his house. He stated that he has been trying to reach out to a number of people about his concerns.

Representative Gray replied that he will help connect Mr. Fay to his Representative.

Jay Meyer, member of the public, read a letter that he wrote to the Task Force.

This letter is inserted on the next page along with other documents Mr. Meyer provided to the Task Force members. See pages 15-28.

Senator Townsend asked members if there are any more comments from Task Force members. As there were none, the Task Force meeting was brought to a close at 12:01 p.m.

WE DIDN'T START THE FIRE

The crisis in Flint, Michigan and other cities offer more evidence that water contamination is a threat to human development. In the natural world a new U.S. Geological Survey study shows the same is true for wildlife. Just look at the dead Eagles that have been found in the area around Dagsboro and Millsboro.

Look at Parkersburg, West Virginia, livestock and birds started dying and thousands of residents contracted unexplained illnesses, evidence pointed to pollution from DuPont manufacturing as the cause by discharging their wastes into the Ohio River. In Delaware we wonder why are Eagles are dying? Just look at pollutants being the cause, because there are no other good reasons.

Tonight the EPA is holding a meeting in Millsboro to report and discuss Removal Action to the contaminated soil and groundwater at the Millsboro TCE Superfund Site in Millsboro. This contamination impacted 2 shallow public wells that supply the Town of Millsboro to produce public drinking water.

Company's discharging their wastes into our waterways, I know you are familiar with the Allen/Harim controversy in Millsboro, now the same situation is developing in Milton and Harbeson. The State wants to allow them to discharge into the Beaver Dam Creek, that flows into the Broadkill River and flows into the town of Lewes. What is worse is that they want to alter the TDML (Total Daily Maximum Load) of pollutants that is in the discharge permit for 5 years or until they build a new waste water treatment plant.

The Great Marsh near Lewes has all the signs of a healthy ecosystem: 2 types of native grasses, a diversity of wildlife and the tidal Canary Creek that meanders through it. During storms and floods, wetlands absorb water to reduce flooding. And as the effects of sea level rise and climate change continue to affect Delaware's coastline, the health of their marshes become more important. The Great Marsh is located just off of the Broadkill River which as I said is fed by Beaver Dam Creek where there are plans to discharge poultry wastes, has anyone ever thought to look at what this discharge will do to the Great Marsh?

Look at the manure/runoff problems we now have, with all the new CAFO's that are in the plans, has the Clean Water Task Force addressed this issue? All over Delmarva residences are fighting against these large CAFO's, their way of life is being challenged by large industrial compounds in disguise as local poultry farmers when in effect they are a unregulated industry being governed by laws made for small local farmers. Has anyone ever tried to look into who these Industrial factory's are owned by?? Well I have and it mostly by foreigners from New York whose identity's are hidden by shell companies

If you have any concern for our local poultry growers, they are about to be put out of business by these large industrial complexes owned by foreigners. They will go the way of all the mom & pop stores who cannot compete with these large CAFO's and will be left with enormous debt..

I have a report titled "China is making a major play for American Farms and Farmland" Companies backed by the Chinese government are making Big Ag acquisitions in the United States. <http://www.takepart.com/article/2016/02/22/china-syngenta-smithfield>

China won't have to fire one gun to take over America, they are slowly buying it piece by piece,

Below are comments from the Assateague Coastkeeper on CAFO's in Somerset County, Maryland, just across the State line:

Within two years, these homeowners were surrounded by industrial scale poultry houses. Because of the particulates and manure and feathers being blown out into the air from the hundreds of huge fans venting all the bad stuff from inside the poultry houses out into the air those people breathe, they knew from that point on they could never open their windows again, they could not hang laundry outside to dry, they had to live with black flies and ammonia stench, and they knew they would never be able to sell their property and leave.

This is why residents of Somerset County have demanded better zoning regulations, to protect the health of their families and to protect their property values. This is not farming....this is INDUSTRY and it must be zoned accordingly. Join the residents of Somerset County on Nov 5 - attend the public hearing and show your support.

CAFO Facts from National Association of Local Boards of Health

The most pressing public health issue associated with CAFOs stems from the amount of manure they produce. CAFO manure contains a variety of potential contaminants. It can contain plant nutrients such as nitrogen and phosphorus, pathogens such as *E. coli*, growth hormones, antibiotics, chemicals used as additives to the manure or to clean equipment, animal blood, silage leachate from corn feed, or copper sulfate. The increased clustering and growth of CAFOs has led to growing environmental problems in many communities. The excess production of manure and problems with storage or manure management can affect ground and surface water quality. Emissions from degrading manure and livestock digestive processes produce air pollutants that often affect ambient air quality in communities surrounding CAFOs. CAFOs can also be the source of greenhouse gases, which contribute to global climate change.

All of the environmental problems with CAFOs have direct impact on human health and welfare for communities that contain large industrial farms. As the following sections demonstrate, human health can suffer because of contaminated air and degraded water quality, or from diseases spread from farms. Quality of life can suffer because of odors or insect vectors surrounding farms, and property values can drop, affecting the financial stability of a community. One study found that 82.8% of those living near and 89.5% of those living far from CAFOs believed that their property values decreased, and 92.2% of those living near and 78.9% of those living far from CAFOs believed the odor from manure was a problem. The study found that real estate values had not dropped and odor infestations were not validated by local governmental staff in the areas. However, the concerns show that CAFOs remain contentious in communities (Schmalzried and Fallon, 2007). CAFOs are an excellent example of how environmental problems can directly impact human and community well-being.

Groundwater can be contaminated by CAFOs through runoff from land application of manure, leaching from manure that has been improperly spread on land, or through leaks or breaks in storage or containment units. The EPA's 2000 National Water Quality Inventory found that 29 states specifically identified animal feeding operations, not just concentrated animal feeding operations, as contributing to water quality impairment (Congressional Research Service, 2008). A study of private water wells in Idaho detected levels of veterinary antibiotics, as well as elevated levels of nitrates (Batt, Snow, & Alga, 2006). Groundwater is a major source of drinking water in the United States. The EPA estimates that 53% of the population relies on groundwater for drinking water, often at much higher rates in rural areas (EPA, 2004). Unlike surface water, groundwater contamination sources are more difficult to monitor. The extent and source of contamination are often harder to pinpoint in groundwater than surface water contamination. Regular testing of household water wells for total and fecal coliform bacteria is a crucial element in monitoring groundwater quality, and can be the first step in

discovering contamination issues related to CAFO discharge. Groundwater contamination can also affect surface water.

The agriculture sector, including CAFOs, is the leading contributor of pollutants to lakes, rivers, and reservoirs. It has been found that states with high concentrations of CAFOs experience on average 20 to 30 serious water quality problems per year as a result of manure management problems (EPA, 2001). This pollution can be caused by surface discharges or other types of discharges. Surface discharges can be caused by heavy storms or floods that cause storage lagoons to overflow, running off into nearby bodies of water. Pollutants can also travel over land or through surface drainage systems to nearby bodies of water, be discharged through manmade ditches or flushing systems found in CAFOs, or come into contact with surface water that passes directly through the farming area. Soil erosion can contribute to water pollution, as some pollutants can bond to eroded soil and travel to watersheds (EPA, 2001). Other types of discharges occur when pollutants travel to surface water through other mediums, such as groundwater or air.

Contamination in surface water can cause nitrates and other nutrients to build up. Ammonia is often found in surface waters surrounding CAFOs. Ammonia causes oxygen depletion from water, which itself can kill aquatic life. Ammonia also converts into nitrates, which can cause nutrient overloads in surface waters (EPA, 1998). Excessive nutrient concentrations, such as nitrogen or phosphorus, can lead to eutrophication and make water inhabitable to fish or indigenous aquatic life (Sierra Club Michigan Chapter, n.d.). Nutrient over-enrichment causes algal blooms, or a rapid increase of algae growth in an aquatic environment (Science Daily, n.d.). Algal blooms can cause a spiral of environmental problems to an aquatic system. Large groups of algae can block sunlight from underwater plant life, which are habitats for much aquatic life. When algae growth increases in surface water, it can also dominate other resources and cause plants to die. The dead plants provide fuel for bacteria to grow and increased bacteria use more of the water's oxygen supply. Oxygen depletion once again causes indigenous aquatic life to die. Some algal blooms can contain toxic algae and other microorganisms, including *Pfiesteria*, which has caused large fish kills in North Carolina, Maryland, and the Chesapeake Bay area (Spellman & Whiting, 2007). Eutrophication can cause serious problems in surface waters and disrupt the ecological balance.

Water tests have also uncovered hormones in surface waters around CAFOs (Burkholder et al., 2007). Studies show that these hormones alter the reproductive habits of aquatic species living in these waters, including a significant decrease in the fertility of female fish. CAFO runoff can also lead to the presence of fecal bacteria or pathogens in surface water. One study showed that protozoa such as *Cryptosporidium parvum* and *Giardia* were found in over 80% of surface water sites tested (Spellman & Whiting, 2007). Fecal bacteria pollution in water from manure land application is also responsible for many beach closures and shellfish restrictions.

Air Quality

In addition to polluting ground and surface water, CAFOs also contribute to the reduction of air quality in areas surrounding industrial farms. Animal feeding operations produce several types of air emissions, including gaseous and particulate substances, and CAFOs produce even more emissions due to their size. The primary cause of gaseous emissions is the decomposition of animal manure, while particulate substances are caused by the movement of animals. The type, amount, and rate of emissions created depends on what state the manure is in (solid, slurry, or liquid), and how it is treated or contained after it is excreted. Sometimes manure is "stabilized" in anaerobic lagoons, which reduces volatile solids and controls odor before land application.

The most typical pollutants found in air surrounding CAFOs are ammonia, hydrogen sulfide, methane, and particulate matter, all of which have varying human health risks

Author

Carrie Hribar, MA
Project Coordinator – Education and Training
National Association of Local Boards of Health

86% of Delaware's rivers and streams and 44% of ponds and lakes are not safe for swimming due to high bacteria. 97% of rivers and streams have some sort of advisory recommending limits on the consumption of fish. Over 100 miles of water have fish consumption advisories from metals, pesticides and chemicals.

A recent article in the News Journal stated that Delaware's Tourism was worth \$3 Billion in 2014.

What is the State willing to contribute to help keeping the \$3 Billion we make off of tourism by providing clean water?

How much did the state give to the Dupont/Dow Company in incentives for keeping their offices in Delaware? How much does Dupont/Dow contribute to our economy?

Delaware has committed \$9.6 million from the state's Strategic Fund over the next five years to encourage continued investment by DuPont and its successors. Lawmakers also approved a "Commitment to Innovation" act to expand a "New Economy Jobs" tax credit that will enable DuPont to cut its state taxes \$3.5 million in fiscal 2017 and a total of \$10 million a year by 2019.

"The \$10 million in lost revenue can be compared to more than \$17 million per year in personal-income-tax revenue that would be lost" if all 3,200 DuPont headquarters, contractor, supply, and other dependent jobs ended up exiting Delaware, leaving only factories, labs, and warehouses, Jonathon Dworkin, a spokesman for Markell, told me. The law also expands research and development tax credits.

New Castle County Executive Tom Gordon and his elected council voted Tuesday to give DuPont an additional \$7.5 million in cash from a newly approved Strategic Economic Development Fund, funded by "county reserves."

Gov. Jack Markell on Tuesday proposed an \$800 million program to clean Delaware waterways, curb stormwater runoff and flooding, and protect drinking water, suggesting a statewide tax that would cost most homeowners \$45 a year, and more borrowing to pay for the effort.

"Somebody has to do this," Markell said. "We have a fundamental responsibility, I believe, to leave the next generation cleaner water – water you can fish in, water you can swim in, not as many problems with drinking water, not as many problems with stormwater and all that flooding. ... It's just not acceptable and it's embarrassing."

The governor's plan relies on the new tax charged to property owners, which would generate \$30 million annually, and a \$60 million each year in new state borrowing or state-assisted loans by others. That money would be added to the current \$30 million set aside for state water projects.

Is this contribution to Dupont going to be another Fisker Deal, costing \$21 Million?

The Governor's plan wants to charge our citizens \$45 a year to provide for clean water, maybe we should be looking into other alternatives such as charging the large industrial CAFO's their fair share of cost for Clean Water, the industries that discharge now into the water ways, let them pick up part of the tab, let the State provide money from their Strategic Fund, they found money for Dupont/Dow but will Dupont/Dow provide the \$3 Billion a year we get from the tourism.

There are many poor neighborhoods in the state that people cannot afford \$45 a year, its time that the State should be forced to pay for their mistakes in allowing the industrial community get a way with polluting our waterways and allowing our rivers and streams to get so polluted.

As Billy Joels song says...."We didn't start the fire, no we didn't light it, but we are trying to fight it"

So lets have another hearing, more questions, no good answers , and if recent history is our guide there won't be any answers. There is some mystifying resistance to determining the environmental impact of major industrial developments that discharge potential pollutants. It's odd, given the price we'll pay for clean water if we make a mistake.

Attachment: Letter dated 1..21.16 from The Johns Hopkins Center for a Livable Future Bloomberg School of Public Health on large concentrations of broiler chickens.

Thank you,

Jay Meyer
302-584-2744
Protecting our Indian River

Outlook.COM Print Message

Page 1 of 6

[Print](#)[Close](#)

CAFO letter john hopkins

From: **Joseph Meyer** (possumpointer@hotmail.com)
Sent: Mon 4/11/16 2:05 PM
To: jay meyer (possumpointer@hotmail.com)

Letter from The Johns Hopkins Center for a Livable Future to Salisbury MD's Health Officer

**The Johns Hopkins Center for a Livable Future Bloomberg School of Public Health
615 North Wolfe Street, W7010 Baltimore, MD 21205**

January 21, 2016

**Lori A. Brewster, Health Officer Seth H. Hurdle Building
108 East Main St., Salisbury, MD 21801**

Disclaimer: The opinions expressed herein are our own and do not necessarily reflect the views of The Johns Hopkins University.

To Whom It May Concern:

We are researchers at The Johns Hopkins Center for a Livable Future, based at the Bloomberg School of Public Health in the Department of Environmental Health Sciences. The Center engages in research, policy analysis, education, and other activities guided by an ecologic perspective that diet, food production, the environment, and public health are interwoven elements of a complex system. We recognize the prominent role that food animal production plays regarding a wide range of public health issues surrounding that system.

Below, we summarize the peer-reviewed scientific literature on the human health concerns associated with industrial broiler production, a model characterized in part by specialized operations designed for a high rate of production and large numbers of broilers confined at high density. This information is highly relevant to Wicomico County, because in 2012 the county had an inventory of 11 million broilers – the fourth largest of any county in Maryland (1). In 2012, there were 110 broiler operations in the county, 76 of which sold between 200,000- 499,999 birds per operation, and 35 of which sold over 500,000 broilers per operation (1). Wicomico is adjacent to counties with the largest (Somerset) and second largest (Worcester) broiler inventories in the state (1).

We are writing to present the known human health concerns associated with industrial broiler production, focusing on those that may affect citizens living near broiler operations in Wicomico County.

<https://blu175.mail.live.com/ol/mail.mvc/PrintMessages?mkt=en-us>

4/11/2016

Human health concerns associated with industrial broiler production include:

- Infections resulting from the potential transmission of harmful microorganisms from broiler operations to nearby residents, for example, via flies or contaminated air and water;
- Health effects, including asthma, bronchitis, allergic reactions, associated with exposures to air pollution from broiler operations;
- Health effects (e.g. thyroid problems, methemoglobinemia, neurological impairments, liver damage) associated with exposures to nitrates, drug residues, and other hazards that may be present in ground and/or surface waters contaminated by manure from broiler operations.

Disease transmission

Crowded conditions in industrial broiler operations present opportunities for the transmission of bacterial pathogens among animals, and between animals and humans (2). Human exposure to infectious agents can occur through multiple routes, including breathing contaminated air and drinking contaminated water (3-7).

Of additional concern is exposure to pathogens that are resistant to antibiotics used in human medicine. The non-medicinal use of antibiotic drugs as a means for growth promotion¹ in animals has become commonplace—an estimated 80 percent of antibiotics sold for human and animal uses in the U.S. are sold for use in food-producing animals (8). Administering antibiotics to animals at levels too low to treat disease fosters the proliferation of antibiotic-resistant pathogens. Resistant infections in humans are more difficult and expensive to treat (9) and more often fatal (10) than infections with non-resistant strains.

A growing body of evidence provides support that pathogens can be found in and around broiler operations. In broiler operations that administer antibiotics for non-therapeutic purposes, broilers have been shown to be carriers of antibiotic-resistant pathogens (11-14) and these resistant pathogens have also been found in the environment in and around broiler production facilities, specifically in the litter (15), flies (16), and manure (17). Additionally, Salmonella and Campylobacter are highly prevalent among U.S. broilers, and Campylobacter is found in about 50% of manure samples (18). Campylobacter infections in people have led to gastrointestinal illness, neuromuscular paralysis, and arthritis (18).

Several studies have shown that workers in broiler operations are disproportionately exposed to pathogens: in a Dutch study, 5.6% of broiler workers were carriers of methicillin-resistant Staphylococcus aureus (MRSA) (19) vs. 0.01% of the general population, and broiler workers on the Delmarva Peninsula were found to have 32 times the odds of carrying gentamicin-resistant E. coli compared with other residents in the community (3). Colonized or infected workers may transport pathogens into their communities (3).

Manure runoff from broiler operations may introduce harmful microorganisms, such as Campylobacter (17), into nearby water sources. Land application of broiler manure may present an opportunity for pathogens contained in the manure to leach into the ground or run off into

recreational water and drinking water sources, potentially causing a waterborne disease outbreak (17).

People living near broiler operations may be exposed to harmful microorganisms, which have been found to be spread in the air up to 3,000 meters from broiler operations (4). The shape and spread of this airflow varies with changes in wind patterns, making it difficult to predict which residents might be most affected (4). Still, infectious agents have been found on deposits of particulate matter several miles from operations (4). Harmful bacteria such as *Campylobacter* have been reported to enter and leave poultry operations via insects and massive ventilation systems (6). One study on Maryland's Eastern Shore found that current methods of transporting chickens in open-air trucks releases microorganisms into the surrounding environment, likely exposing nearby residents to these pathogens (7).

The elevated presence of flies near broiler operations can be more than just a nuisance; it also may facilitate residents' exposure to pathogens, including antibiotics-resistant strains of *Enterococci* and *Staphylococci* (6, 16). One study found that residences within 0.5 mile of broiler operations were found to have 83 times the average number of flies of control households (19).

Air pollution from broiler operations

The air inside broiler operations contains elevated concentrations of gases, particulate matter, pathogens, endotoxins, and other hazards (5, 6, 16, 20-22). Airborne contaminants from broiler operations are transported from broiler houses through large exhaust fans and may pose a health risk to nearby residents (4, 6, 17, 23-28). Ammonia (29), particulate matter (17), endotoxins (27), and microorganisms (4, 6, 17) have been detected in air samples surrounding poultry operations. While there are currently few data available on odor, nitrous oxide, hydrogen sulfide, and non-methane volatile organic compound levels surrounding poultry operations, odors associated with air pollutants from intensive livestock hog operations have been shown to interfere with daily activities, quality of life, social gatherings, and community cohesion (25, 30, 31).

Exposure to airborne contaminants from broiler operations has been associated with a range of adverse health effects. Ammonia emissions have been implicated in respiratory health, with up to 50% of poultry workers suffering from upper respiratory illnesses that are believed to be due to ammonia exposure (23). Studies have shown that endotoxin exposure can exacerbate pre-existing asthma or induce new cases of asthma, and exposure was found to be a significant predictor of chronic phlegm for poultry workers (25, 32). Particulate matter—consisting mainly of down feathers, mineral crystals from urine, and poultry litter in broiler operations—may also have detrimental effects on human health, causing chronic cough and phlegm, chronic bronchitis, allergic reactions, and asthma-like symptoms in farmers, and respiratory problems in people living in the vicinities of operations (27). Additionally, poultry workers demonstrated a high prevalence of obstructive pulmonary disorders, with increasing prevalence associated with longer exposure, regardless of smoking status (26).

A 2010 USDA study measured volatile organic compounds (VOCs) inside industrial broiler operations and found that close to 70% of VOCs included acetic acid, 2,3-butanedione, methanol, acetone, and ethanol (33); similar studies have not been conducted outside of broiler operations, and would help to characterize nearby residents' exposure to VOCs. It is important to note that even

industrial broiler operations that employ best management practices and mitigation techniques have been shown to generate airborne contaminants (24).

Contaminated ground and surface water

Manure from broiler operations may contain nutrients, heavy metals, drug residues, and pathogens that can leach into groundwater or runoff into surface water (5, 28, 19, 34, 35). Studies have demonstrated that humans can be exposed to waterborne contaminants from livestock and poultry operations through the recreational use of contaminated surface water and the ingestion of contaminated drinking water (22, 35). Furthermore, the disposal and decomposition of diseased poultry carcasses may contaminate water sources and pose a threat to human health (19).

The nutrients nitrogen and phosphorus--naturally occurring in chicken manure--have been found in both ground and surface water near Maryland broiler chicken operations (36) and can have deleterious effects on water quality and human health (17, 19, 22, 26, 35, 37-39). A University of Maryland Eastern Shore pilot study found that 67% of private wells—which residents are responsible for testing and maintaining—failed to meet drinking water standards for total coliform, 36% tested positive for *E. coli*, and 31% failed the standards for total dissolved solids and pH (40). In one study, broiler chicken and corn production were associated with higher nitrate concentrations (naturally occurring in manure) in drinking water in Maryland wells (37). Ingesting high levels of nitrate has been associated with increased risks for thyroid conditions (22, 41, 42), birth defects and other reproductive problems (22, 42, 43), diabetes (22, 42), various cancers (42, 44), and methemoglobinemia (blue baby syndrome), a potentially fatal condition among infants (22, 45). Approximately 60,000 Wicomico County residents rely on private wells for drinking water (46), so there is cause for concern regarding the spread of nitrate into groundwater drinking sources.

Nutrient runoff has also been implicated in the growth of harmful algal blooms (17, 19, 38, 47), which may pose health risks for people who swim or fish in recreational waters, or who consume contaminated seafood. Exposure to algal toxins (such as the toxic dinoflagellate, *Pfiesteria piscicida*) has been linked to neurological impairments, liver damage, stomach illness, skin lesions, and other adverse health effects (38, 39, 48).

Finally, there may be health risks associated with exposure to drug residues and excreted hormones found in chicken manure-contaminated ground and surface water. Of particular concern is estradiol, which is naturally found at high levels in chicken manure and is an endocrine-disruptor in humans (49). Environmental estrogens such as estradiol may be linked to increased incidence of male reproductive tract disorders, reduced sperm counts, and increases in the frequency of female breast cancer (49). Estradiol has been found in Chesapeake Bay tributaries in levels high enough to induce estrogenic effects on aquatic organisms (19, 49). Increasing the number of chickens produced in the bay's tributaries would likely increase the amount of estradiol entering the bay through manure runoff, thereby increasing the potential for endocrine-disruption in humans through water-borne estradiol exposure.

Conclusion

A growing body of evidence has implicated industrial broiler production in the spread of infectious diseases (including antibiotic-resistant strains), the generation and spread of airborne contaminants,

and the contamination of ground and surface waters. We hope our letter is helpful in describing some of the public health concerns associated with the potential expansion of broiler operations in Wicomico County. Through our research, we know that health departments face many barriers addressing issues surrounding industrial farm animal production (50, 51), and we are prepared to serve as a resource to your offices. Please do not hesitate to contact us if you have any questions.

Sincerely,

Robert S. Lawrence, MD, MACP, FACPM
The Center for a Livable Future Professor in Environmental Health Sciences
Professor, Departments of Environmental Health Sciences, Health Policy and Management, and International Health
Johns Hopkins Bloomberg School of Public Health Director, Johns Hopkins Center for a Livable Future Johns Hopkins University

Keeve E. Nachman, PhD, MHS
Assistant Professor, Departments of Environmental Health Sciences and Health Policy and Management
Johns Hopkins Bloomberg School of Public Health

Program Director, Food Production and Public Health Johns Hopkins Center for a Livable Future
Johns Hopkins University

Robert Martin
Senior Lecturer, Environmental Health Sciences Johns Hopkins Bloomberg School of Public Health
Program Director, Food System Policy
Johns Hopkins Center for a Livable Future Johns Hopkins University

Jillian P. Fry, PhD, MPH
Assistant Scientist, Department of Environmental Health Sciences Johns Hopkins Bloomberg School of Public Health
Project Director, Food Production and Public Health Johns Hopkins Center for a Livable Future
Johns Hopkins University

Brent F. Kim, MHS
Program Officer, Food Production and Public Health Johns Hopkins Center for a Livable Future
Johns Hopkins University

Claire M. Fitch, MSPH
Program Officer, Food Systems Policy Johns Hopkins Center for a Livable Future Johns Hopkins University

Ruth Burrows
Research Assistant, Food Systems Sustainability and Public Health Johns Hopkins Center for a Livable Future
Johns Hopkins University

Visit Al Jazeera English

(/)

U.S. (/TOPICS/TOPIC/CATEGORIES/US.HTML)

RYAN SCHUESSLER

Maryland residents fight poultry industry expansion

An additional 200 large-scale chicken farms will be operating by the end of the year in the Delmarva peninsula.

November 23, 2015 5:00AM ET

by **Ryan Schuessler** (/profiles/s/ryan-schuessler.html) - @RyanSchuessler1 (<http://www.tw>)

PRINCESS ANNE, Md. – Steve Glasgow says things are changing on the Delmarva Peninsula.

chicken CAFO that she said her grandparents wouldn't recognize.

"I'm not at all against poultry," she said. "But this is industrial-sized farming. This does not belong in our neighborhood."



Lisa Inzerillo of Princess Anne, Maryland talks to reporters across from the chicken CAFO near her home. Ryan Schuessler

While earlier generations of farmers would build one or two chicken houses on their property, many modern farms in Somerset County pack five, six, or even ten poultry houses — each up to 600 feet long — on a single plot of land.

Local zoning laws classify chicken CAFOs as agricultural land use (rather than industrial), meaning the chicken houses can be built as close as 200 feet to residential areas. Within three miles of Inzerillo's house, she said, there are

now about 80 chicken houses.

"I smell the ammonia," Inzerillo, a flight attendant, said. "It's the smell of manure. You can smell it from over a mile away."

"You have to wear a dust mask if you ride through here," said Glasgow, who lives down the road. "If you open your windows up and the wind's going the right direction, you get chicken dust everywhere."

In the wake of all this, researchers have become concerned about how the chicken CAFOs might impact residents' health.

Dust from the chicken houses contains ammonia, said Jillian Fry, director of the Public Health & Sustainable Aquaculture Project at Johns Hopkins University's Center for a Livable Future. "It contains particulate matter. It contains other volatile compounds. And of course pathogens from the chickens."

In September, Fry was among seven researchers from Johns Hopkins who signed a sternly worded letter to Bill Satterfield, responding to what they say were false claims made by the poultry industry's representatives. Contrary to industry statements, the letter contended that the number of chicken houses on the peninsula was increasing, and that the new houses were polluting waterways.

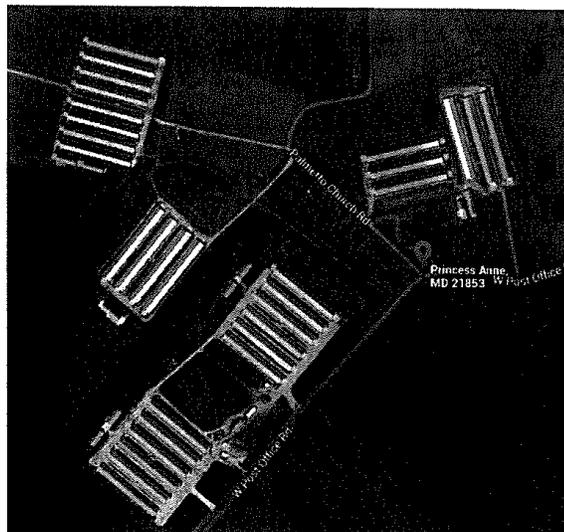
The letter stated that in 2013 at least 215,349 tons of poultry waste — containing 5 million pounds of phosphorous, which fuels toxic algal blooms in high concentrations — was moved off chicken farms in the area. Much of it ended up on agricultural land in the Chesapeake Bay watershed.

“There are a lot of threats because of all the manure buildup and air pollution,” Fry said. “This is not just an environmental issue. It is very tied with public health.”

A 2010 study from the University of Maryland, Eastern Shore found two-thirds of water samples taken from drinking wells contained too much coliform bacteria to meet drinking requirements (<http://www.delmarvanow.com/story/news/local/maryland/2015/06/06/delmarva-health-poultry/28622573/>). Coliform bacteria, which can cause intestinal illnesses, can come from animal or human waste. Around three out of five people in Somerset County rely on groundwater as drinking water.

Satterfield said the industry is taking measures to mitigate pollution, such as planting buffer gardens around chicken farms. As an example of the industry's environmental efforts, he mentioned a nearby facility that converts chicken manure into fertilizer. “We've made tremendous progress,” he said. “We're far ahead of where we were 15 years ago.”

However, the Johns Hopkins researchers found that only seven percent of manure from surveyed farms ended up at that facility, and



A Google Map shows a row of six houses in Delmarva surrounded by 30 poultry houses. Google

questioned the method's sustainability. "These alternative uses of manure are not a realistic solution for current manure production or the forecasted increase in manure," researchers wrote, joining the call for a moratorium on new chicken houses in Maryland until regulations are re-written.

Opponents are not surprised by the actions of an industry they see as putting profits above health and the environment. "There is only one thing that drives the industry and that is greed," said Carole Morison, who used to run a chicken CAFO for a national poultry company and now sells free-range eggs to Whole Foods. "They want the jingle in their pockets."

Andrew McLean, a Delmarva farmer with a chicken CAFO, disagrees. "Agriculture has been going this way for a long time," he said. "It didn't spring up like a daffodil."

Regardless of the industry's motives, it's the largely unchecked growth that is angering residents and concerning researchers.

"We need more monitoring done before we put more facilities in," said Sacoby Wilson of the University of Maryland School of Public Health. "The lack of evidence to drive policy is an issue."

Calling the explosion of chicken CAFOs "environmental terrorism," Wilson described what he viewed as the fallout. "You have no control over what happens to your community. You have no control over what happens near your house. The health of your kids, the health of your parents."

"The zoning laws on agriculture are based on what agriculture was 50 years ago," said Kathy Phillips, an environmental activist and outspoken critic of chicken CAFOs. You can't even call it a farm anymore."

The largest chicken CAFO in the county is now across the road from the senior living center where Phillips' mother used to live. "That's the new model," Phillips said. "That's what's coming in here."

Down the road from her own house, Lisa Inzerillo pointed to the chicken CAFO built by a developer who lives ten miles away. "You're just looking at your bottom line," she said. "That's not farming to me."